Det. Bel. Isle & Windsor Ferry Co. 68

DEVOTED TO NAVIGATION, COMMERCE, ENGINEERING AND SCIENCE.

VOL. X NO. 50. CLEVELAND, O., DECEMBER 13 1888. $2.00 PER ANNUM SINGLE COPIES 5 CENTS

AROUND THE LAKES.

CLEVELAND, OHIO.

A meeting of vessel owners is to be held at Mr. M. A. Bradley's, office on Saturday, 15 inst., at 10:30 a. m. to consider, or if necessary adopt means for the introduction of the mutual marine insurance system.

The propeller Continental comes out of the Cleveland dry dock to-day. She has had a new fore foot and part new stern, and a thorough calking outside.

We may mention here that the boiler shops, engine shops, drafting rooms, and general offices are situated about half a mile from the shipyard on Spruce and Center streets.

J. W. Grover & Son, shipchandlers and riggers, lost two spars which they had erected as sheer legs, the main tackle, and other gear at the recent blaze in the Globe shipyard. About $400 will replace the outfit.

Captain A. C. Smith, of Detroit, is in the city to day on business connected with vessel property. The captain says that the steambarge Birkhead has had a successful season all parties interested being fairly well satisfied.

J. E. Peterson, North Amherst, O., has patented and will put on the market an invention which he calls the Perfect Aroma Coffee Extractor. He claims this instrument will save 50 per cent in the use of coffee, and will extract every particle of the essence in short order. This will be a boon to many who like their coffee strong.

Mr. Schumaker, engineer of the propeller Aurora, owned by J. Corrigan, is loud in the praises of this fine boat. He says that it is no trouble for her to take her tow along through the water at the rate of eleven miles per hour. Her engines, built by the Cleveland Shipbuilding Company, run as easy as a sewing machine.

The recent fire at the Globe Iron Works shipyard has proved less disastrous than was at first supposed, for although machine shops 400 feet in length were burned, yet, by the skilful management of the firm, the contracts in hand will not be delayed by even a few days. Already nine fires out of twenty-four are busy, and about a dozen machines including a set of rolls are at work. By early next week one of the large furnaces will be in operation, and the material for new buildings is now on the ground. It would seem as if the loss of the moulds and drawings were the greatest loss in so far as time is concerned. The result of the fire has been greatly magnified by newspaper accounts, and to people at a distance it has been made to appear as if the entire plant would have to suspend operations indefinitely, we take great pleasure in stating that in less than twenty-four working hours after the blaze over 1,000 men were employed, and remain so, while a person unacquainted with the buildings at the yards would never miss the line of shops, and this is the only indication of what was said to be a tremendous blaze. The firm has a $1,200 fire outfit at the yard, and the city has five fire plugs in addition, so that the fiercest fire could be controlled at short notice. These precautions were considered necessary when over a million and a half dollars were laid out, as is the case at present. Much credit, however, is due to the energetic and workmanlike spirit of the principals of the firm in keeping their workmen all busy as usual, and settling direct with the insurance companies at figures resembling $17,000.

Meteorological summary for the week ending December 11, 1888:

Mean actual barometer	29.97
Mean temperature	36.2
Mean humidity	74.6
Total precipitation	.61
Prevailing direction of wind	Sw&Nw
Total wind movement	1408
Av. cloudiness	8 6
Av. state of weather	Cloudy
Max. temperature, highest	45.5
Max. temperature, lowest	25.0

W. H. HAMMON, Sgt. Signal Corps U. S. A.

CHICAGO, ILL.

Special to the Marine Record.

Collins Bros., the vessel supplymen have removed to 81 Canal street, corner of Canal and Madison, the MARINE RECORD will be found there always to be read by stewards and shipkeepers.

The steamship Germanic, left Chicago for Buffalo Friday night, December 7th, with 57,500 bushels of corn.

The fine steamship Roumanie, arrived early Saturday morning, from Buffalo, with 1,900 tons of coal consigned to the Delaware & Hudson Coal Co. The barge Golden Age made room for her at that dock and she was unloaded Monday morning about eleven a. m., when she went to some elevators to load corn and left here for Buffalo Tuesday night.

The fine steamship Australia arrived here light from Milwaukee, Saturday evening. She loaded 75,000 bushels of corn for Buffalo and left Chicago at 4 p. m. on Monday.

James Corrigan, owner of the steamships Roumania and Australasia, was in Chicago looking after the interests of his splendid steamships.

The schooner Charles Foster, arrived here Saturday evening with coal from Buffalo.

The fine steamship J. Emory Owen, Captain Young, with her consort Michigan, arrived from Buffalo, with coal last Thursday at midnight. They left Buffalo at 5 p. m. on the 30th of November without any insurance. The John Emory Owen, started out June 2nd this year and has made 8½ trips between Lake Superior and Lake Erie ports and Chicago and Lake Erie ports and has proved herself a splendid business boat.

At the Chicago Drydock Co., the propeller Escanaba, was in dock for bottom calking new stem and other repairs, the tugs Crowell, Tarrant and Chicago for general repairs and re calking, the schooner James Mowatt and Mary D. Ayer and barges Shawnee and Ashland for general repairs.

Captain H. W. Hart, of the fine steamship Fannie C. Hart, was around the lumber market Tuesday offering to bet from $300 to $1,000 that no lumber barge hailing out of this port could beat his steambarge on a 300 mile run on Lake Michigan, but he could not find any takers.

The schooner Hershell, Captain James Clark, arrived last Saturday with lumber from Manistee. She left Chicago on the 1st. of December and made an excellent trip.

At Miller Bros. Drydock's the steambarge A. D. Hayward was in dock for leak stopping, the steamship Ira H. Owen to have her shoe fixed, the tug Wolf to have a leak stopped, the barge Mary B. Mitchell is having her top sides calked the steamship Siberia is in dock for bottom calking and other repairs, the barge J. H. Rutter had her decks calked, the schooner D. P. Rhodes was in dock for calking bottom part new center board and new prick post, the steamship Jessie H. Farwell is having her decks repaired and calked, the steamer Spinner is receiving necessary repairs.

The steambarge Maggie Marshall, took on fuel at Richardson & Co.'s, foot of market street and left for Manistee, Monday night to lay up.

Captain David Dall, is giving his tug D. L. Babcock, new deck frames and deck and a new house.

The steambarge Fayette, Captain Disher, has had a very good season without accident of any kind. W. H. Horn and Captain Disher, her owners, are well satisfied with her season's work. She will go into drydock and receive new bulwarks stanchions and stem and new cabin which will be placed aft instead of forward, as at present.

The model steambarge Albert Soper, Captain J. Hogan, was laid up last week. She made 86 round trips this season, 81 between this port and Muskegon, 3 to Menominee and 2 to Manistee, proving that her worthy captain was no slouch.

Captain John A. Connelly, is placing his steambarge the Thos. R. Scott, in winter quarters. He has made the best record of all his predecessors, having run 75 successful trips between this port and Muskegon this season.

The schooner Emily B. Maxwell arrived last Thursday morning from Muskegon. She experienced some rough weather and carried away her foretop mast and had her deck load shifted.

Captain James Davidson's fine steamship Germanic, in command of Captain Morris, left here last Friday night with 57,000 bushels of grain for Buffalo.

BUFFALO, N. Y.

Special to the Marine Record.

Work at the Union dry dock is brisk. The keel plates for the new steel steamship building, to the order of Messrs. Kelderhouse, Maytham, Drake, and others, are about half laid and in a few days a larger force of men will be engaged, and the building pushed vigorously forward.

The Gardner, owned by Connolly Bros., is undergoing a complete rebuild. She will have several new spars including a mizzen lower mast, and fore, and main topmasts. The old lower masts are being reduced 4½ inches in girth, and 10 feet in length. Two new steel arches running the entire length of the vessel, 18¾ inches, and through bolted from the stanchion heads amidships, down through each timber to her keelson. She is also having two new bilge keelsons of oak eight inches square, new timbers and ceiling, extra stanchions, and new plankshare, part new main rail, all new upper works in her stern, new quarter deck, rudder post and several strakes of oak planking five by six inches. Twelve new waste gates are also to be placed in her bulwarks to carry off water.

The Eagle Iron Works, Robert Dunbar and Son, have furnished to Captain Davidson of Bay City, one of their compact machines for deck hoisting, and hauling purposes. Looking at this new machine from a vessel point of view, there are several items of merit, In the first place each drum works independently so that lines or falls led from both ends of the vessel may be worked at the same time, and a winch-end or barrel is placed on the outside having the same reversing power as the drums, a cog wheel and messenger chain can be connected for working main and bilge pumps. A seperate lever operates each drum so that only the steam for the actual work being done is required, and all parts of the machinery are covered in. The size of the hoister is also in its favor being six feet long and three feet nine inches wide, and two feet ten inches high.

At the dry docks of R. Mills and Co., the propeller Wycoming is receiving the repairs mentioned in your last issue. The propeller Buffalo, new steam pipe, repairs on fender strake, and bottom cleaning. Propeller A. P. Wright is at the large derrick for taking on board new boilers, and is having slight repairs done to her upper works. Work on the new boat now building is being pushed rapidly along.

Brown and Co., shipbrokers and agents, have had a fair season's business and consider the outlook for the future as being favorable.

Mr. Bradley, Cleveland vessel owner, is in the city and expects to return home on Friday.

The Maytham line tug T. M. Moore, recently purchased by Mr. Cowley of Cleveland, left here on Tuesday afternoon to be delivered to her new owners. In conversation Captain Maytham expressed the wish that the Moore will be as successful in the future as she has been in the past.

The Lake Erie boiler works have recently shipped two of their boilers to parties in New Orleans, La., and one to a firm in Wilmington, N. C. The business of this well known firm is only limited by their already extensive plant, and we would not be surprised to see large additional works being erected in the near future.

The marine hospital department has had 690 cases under treatment since last July, in addition to 170 cases sent to the hospital during the same period.

Now is the busy season for boiler makers, engineers, machinists, and iron workers in general and Buffalo has a fair share, judging from the hum and activity witnessed around all of her works, even the smaller plants giving and taking the refusal of contracts, which under different circumstances would be considered tolerably lucrative.

A large colored chart, or graphic history of the rise and fall of the American merchant marine from 1789 to 1888, has just been completed for W. W. Bates of this city. The date and plans for this graphic history has occupied the attention of Mr. Bates for a considerable length of time, and the clerkly skill of J. R. Oldham's staff has been put on its mettle in producing this masterpiece of fine scale drawing, an account of which will be published in our next issue. We may mention however, that the lines of imports and exports, the amount of tonnage from foreign ports, the American tonnage, and percentage of foreign trade and transportation, the volume of tonnage engaged in the coastwise trade, the number of vessels built for the foreign trade, of population, and several other important results, the whole extending over the past century as a means of educating the minds of our legislators in the fluctuations, and the rise and fall of the American mercantile marine and other kindred subjects.

Nothing that has ever been published embraces the epitome of maritime knowledge in so concise and correct a form. The mind grasps more clearly the years of prosperity and decadence by viewing the chart, and for our own part half an hour with the graphic history was more instructive than a weeks reading of the subject so ably and pre-eminently handled by the authority mentioned above.

Captain Henry, manager of the Lehigh Valley line of boats, left in the E. P. Wilbur for Cleveland. From there he will go to Chicago.

David Bell will fit out the tug recently purchased by him from Patrick O'Day with an engine eighteen by twenty, and the boat will be put in good shape for next season.

Mr. Brainerd, a member of the firm of Curtis & Brainerd of Toledo, O., was in the city Monday. He states that there will be no material change in the Curtis fleet next season.

One of the new boilers was put on board the propeller Cuba on Monday. Dimensions 75 feet by 8 feet 6 inches.

Capt. Henry Bundy, of the Gospel ship, Glad-Tidings, is in Buffalo to raise $1,000 as a part of the $8,000 which will be raised in Cleveland, Detroit, Chicago, Racine and Milwaukee to build a new Gospel steamboat in place of the sailing schooner just sold. He has raised so far $730 in Buffalo. As a means of affording Capt. Bundy a comfortable and easy living, the scheme is to be commended. It is doubtful however, whether as much can be claimed for the Christian influence of the venture. Capt. Bundy labors among the inhabitants at the lower end of Lake Michigan.

The propeller Nebraska of the Tyler fleet is undergoing extensive repairs. She is at the Union yard and her big wooden arches, that freight handlers object to so much, are coming out to make way for less conspicuous ones. No further changes will be made than are necessary to make a first class freight boat of her. No other vessels of the fleet will be repaired unless it be the Coffinberry and barge Uranus, and it is not decided what will be done with them.

DETROIT, MICH.

In a fair race from Escanaba to this port the propeller Corsica beat the propeller Cambria one hour.

AMHERTSBURG.

During the past week a number of transactions in realestate have taken place in Amhertsburg, which promise to add somewhat to the prosperity of the town. Capt. Stephen B Grummond, of Detroit, on behalf of himself and others, has purchased the dock property next to J. G. Mullen, on which the stone warehouse is situated, and which runs up to and includes the library building on Dalhousie street from J. B. Caldwell for $1,500. The same gentleman has also completed the purchase of the old Heard factory property and water front for about $3,000, although there is some hitch in the matter owing to a bargain made by Leighton & Onellette with James Campeau for part of the lot, without water front, on which the warehouse sat, for $500. to which the latter proposed to move his planing mill. Mr. Grummond is also negotiating for the purchase of the Walker water lot, next to the Heard property. The purpose of all these purchases is not fully disclosed, but a pork packing factory is mentioned in connection with the Caldwell property, and a dry dock and coaling station for Grummond's tugs are mentioned for the rest. Among those interested is Collector Gotts.

KINGSTON, ONT.

The quantity of grain transhipped at this port during the season of 1888 was 3,610,621 bushels, made up of 2,524,104 bushels of corn and 1,086 517 of wheat. The quantity would have been larger but for the break in the Cornwall canal, which entailed serious loss on forwarders. The season therefore, has been unsatisfactory. The crafts wintering here, other than boats of the M. T. & K. & M. Forwarding Co. are the steamer Scotia and consorts, St. Lawrence Maynard, Islander, Maud, Niagara, Van Allen, Hero, Kathleen, and the schooners Jessie Breck, Singapore, Annie Foster, Philo Bennett, Julia, Queen of the Lakes, White Oak. The Niagara and Van Allen will have their engines compounded during the winter, and the steamer Maynard will get a new hull.

The funeral of the wife of Captain Geo. Abrine, which took place 9th inst., was very largely attended. All the mariners in the city attended in a body, showing the respect in which he was held. Rev. J. Houston conducted the service.

DULUTH, MINN.

The last boat through the straits a year ago was the propeller Northerner, which made the passage on December 9.

Captain Inman is figuring on a considerable improvement to the Ossifrage during the winter. She will be refitted and her cabin accommodation so much increased that more than double the present number of staterooms will be furnished. The captain expects to run her three times a week to Port Arthur instead of twice as heretofore. The last of the Inman fleet is now being laid up for the winter. The fleet will not probably be enlarged next year, the captain having tugs enough to handle a tremendous business.

J. B. Williams & Co., the Lake avenue sailmakers, Saturday filed papers at the district court by which an assignment was made to Emil A. King. The assets are put at $548.15 and the liabilities at $976,76. Shields, Brown & Co., and Robert Bros., of Chicago, are the heaviest creditors.

MILWAUKEE, WIS.

As to the progress of the survey for the Canadian Australian cable, we learn that the surveying vessel Egeria has obtained two very deep soundings in the South Pacific, one of 4295 fathoms, and the other of 4430 fathoms, or five statute miles.

OSWEGO, N. Y.

THAT Greenland has been crossed by Dr Nansen and his party, though considerably south of the line originally intended, is now certain. The explorer's letter, published in Copenhagen, says:—"We reached Godthaab on Oct 3rd, and are all in good health." Godthaab is not to be confounded with Godhaven, the Danish colony on the south-west of Disco Island, Greenland.

MARITIME LAW.

SALVAGE — UNWARRANTABLE INTERFERENCE BY SALVOR— TOWAGE— NEGLIGENCE.—LOSS OF CARGO.

U. S. District Court, Southern District of New York.

While the lighter Success was being towed up the North River by the tug Chapman, she shipped considerable water, rendering it necessary to take her ashore to be pumped out. The tug Husted came up and offered her services, which were declined by the master of the lighter; nevertheless the Husted, with the evident concurrence of the Chapman, took the lighter in charge and towed her to the shore, and pumped her out, but while going to the shore, the lighter received two heavy lurches, which threw overboard some of her cargo. Suit was brought by the Husted against the lighter for salvage, and a cross suit by the lighter against the Husted for the loss of the cargo. *Held*, that as the lighter was continually in charge of the tug Chapman, the whole proceeding of the Husted was officious and unwarranted, and her suit for salvage should be dismissed with costs; while for the loss of her cargo the lighter was entitled to recover against the tug.

The proof does not establish that the libellant's lighter Success was overloaded, or improperly loaded, or loaded more than usual. In going up the North river, in tow of the tug Chapman, on a hawser, she shipped considerable water through the effect of the swells from passing steamers; and the hatches not being tight so much water was taken in her hold as to make her cranky, and render it inexpedient to continue her trip. The best thing to do was to take her ashore to be pumped out. Nothing more was needed. While the Chapman was backing down alongside of her the Husted came up and offered to pump her out, for which she had means, while the Chapman had not. The Husted's captain, in answer to inquiries, not stating the charge for bumping out, the captain of the lighter declined his services. It is clear that the captain of the Husted was determined to get, or take, a job; and the Chapman evidently was willing to facilitate this, and to get rid of further trouble with the lighter; and the captain of the Husted, with the evident concurrence of the Chapman, therefore took the lighter in charge, got out a hawser, and proceeded to tow her into pier 41, North river, where he pumped her out. About the time of making fast his hawser, or soon afterward, the lighter received two heavy lurches from swells, and a part of the oil barrels with which she was loaded went overboard. The captain of the lighter had been put by the Chapman on board the Husted, whose captain refused to allow him to go on the lighter, claiming it to be then in his charge. The captain of the lighter, testifies that he demanded to be put on board the lighter in order to steer it, and states that the loss of the barrels was through want of steering, and from the sheer while in tow of the Husted. This is denied by witnesses for the latter.

The whole proceeding on the part of the Husted I must hold to be a gross abuse. It is now claimed that the Success was abandoned; a claim wholly without foundation. The Chapman was as well able as the Husted to take her to either shore. The lighter was in charge of the Chapman, and whatever the immediate manœuvres were, there was evidently no thought of abandoning her by either her master ef the Chapman. There was not the slightest cause for abandonment, and it was the Chapman's duty to take the lighter to a place of safety. It would seem, however, that upon the advice of the latter, the captain of the lighter finally assented that the Husted should take her ashore to be pumped out, and nothing more. The Husted thereby became merely a substitute for the Chapman in taking the lighter into the pier, and in performing the duty that belonged to the Chapman. As the Chapman was perfectly able to perform it, and would have done so but for the Husted's proffer; there is no foundation for any claim of salvage as claimed in the second above entitled case. The element of danger, practically, was wholly wanting. The claim was set up, however, as soon as the Husted had secured posession of the lighter, and the owners, for several days afterwards, were debarred from any posession or control of the lighter.

I am satisfied from the evidence that in approaching the wharf the jibboon of the lighter was run up over the pier, and damages were thereby caused to the lighter, for which the owners of the Husted must answer. Considering the unstable coudition of the lighter amid the swells, although at least 20 minutes had elapsed after she had taken the water aboard, and no further trouble had arisen while she was in the Chapman's charge, in the conflict of evidence, I am not so clear that the dumping of the barrels was caused by the imprudence of the Husted or by want of steering, as to feel authorized to charge her with the cost of picking up the barrels or the loss of those that were not recovered.

The suit for salvage must be dismissed with costs. Any claim that the Husted might have been entitled to for pumping out, and for the time spent in towing her into the dock in place of the Chapman, I regard as fully offset by the injury and the loss to the owner of the lighter through the Husted's officious and unjustifiable interference with the duties of the Chapman and the practical collusion by which the lighter was turned over to the Husted to make a job against the master's will; the Husted's subsequent groundless claims for salvage; and the subsequent detention of the lighter from her owners. In the first action the libellant is entitled to a decree for the damages to the lighter by running her bowsprit upon the wharf with costs; and a reference to compute the damages if not agreed on.

October23, 1888.

A CAPTAIN CAPTURED.

What promises to be an interesting case, says an Owen Sound despatch, will come up before the police magistrate in a few days. The circumstances are these: About eighteen years ago a schooner, the Explorer, with a cargo consisting of mill machinery and 200 barrels of whiskey, ran on a rock near Tobermory, and was reported lost. There was a crew of four on board—the captain, his son and two men. The captain and his son escaped, the other two went down with the boat. The story of the wreck told by the captain, whose name is Waddell, was that, when striking the rock, the vessel ran hard on and shifted her cargo forward. Sending the two men down to shift it aft, the boat swung off the rock and went down bow foremost, carrying the two men with it. Reaching this place, the tale was related and the insurance collected on the vessel and cargo.

Ugly rumors began to float about. Shortly after Waddell and his son were out in a small boat on Lake Huron, and it was told by the boy that the boat capsized and his father was drowned. He, in his dripping clothes, took the farmer, at whose house on the shore he first appeared, and showed him the upturned boat on the shore. The story was received as fact and nothing more thought of the matter till about six years ago, when the crew of a small coasting vessel going around picking up wreckage were informed of the sinking of the schooner, with mill machinery and whiskey aboard. The thought of securing two hundred barrels of "12 year old" was sufficient inducement to raise the boat, so they went to work, and for their trouble found that the Explorer had a full cargo of rocks and the two bodies of the crew among them. The bottom had been bored through in several places, and the whole surroundings indicated a case of cold blooded murder.

These circumstances called up the remembrance of Waddell to some of his former acquaintances and to their great surprise, they recognized the captain in Chicago. They reported the fact to a friend of theirs, Mr. Horace Lymburner, of this town, who was also acquainted with Waddell, having shipped a cargo of lumber in the Explorer. Imagine Mr. Lymburner's surprise when a few days ago who should turn up on our streets but Waddell. Greeting him as Captain Waddell the man replied, with a startled glare in his eyes:

"I am not Captain Waddell."

And shot past him. He was also recognized by a Captain Morrow, who informed P. C. McAuley. This constable has the case in hand and is working it up with good prospects of bringing the guilty man to justice.

In the meantime Waddell is serving a fifteen day's term in jail for being drunk. It is supposed that the whiskey was sold and the proceeds pocketed, and the mill machinery is reported to be now in use in a sawmill on the north shore somewhere, being run by a son of Waddell.

Should the case be proven, it will be one of the most sensational ever brought up here. The appearance of the man who is now in jail, and reported to be Waddell, is that of a most desperate character; so much so as to cause the magistrate to remark that he was the most villianous looking individual who had ever appeared before him. There is a peculiarity in his walk which is identical with that of Waddell. The Crown Attorney has taken up the case and is making inquiries of the insurance companies interested.

Captain Gaskin states that he remembers the incidents connected with the above mentioned wreck quite well. He was pleased to learn that the captain of the vessel had been placed in charge.

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PROPOSALS FOR CONSTRUCTION—U. S. Engineer Office, Cleveland, O., Nov, 14, 1888. Sealed proposals in duplicate, will be received at this office until 12 o'clock m, on Monday, the 17th day of December next, at which time they will be opened in the presence of bidders, for constructing 6 0 lineal feet, more or less, of the structure of east breakwater at Cleveland, Ohio. Preference will be given to materials and plant of domestic production or manufacture, conditions of quality and price (import duties included) being equal. The attention of bidders is invited to acts of congress approved Feb 26, 1885, and Feb 23, 1887, vol. 24, page 414, statutes at large. All information can be obtained at this office. The United States reserves the right to reject any or all proposals. L. COOPER OVERMAN, Major of Engineers.

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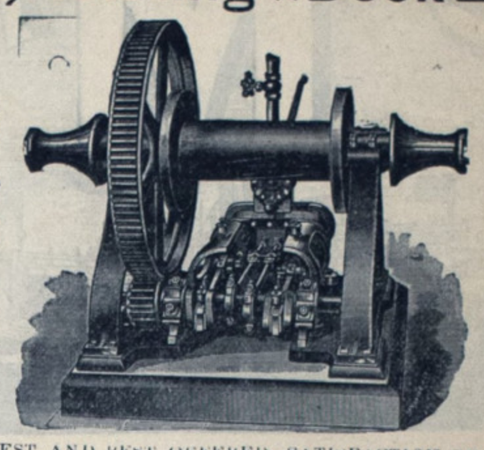

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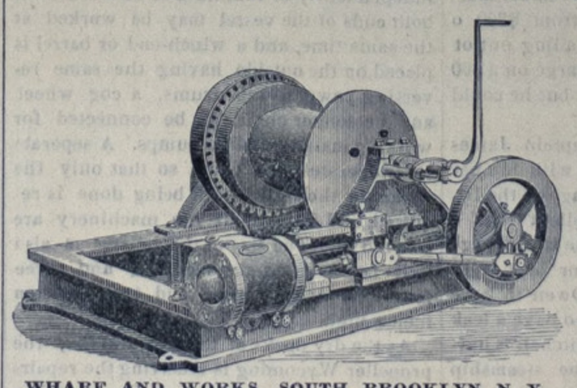

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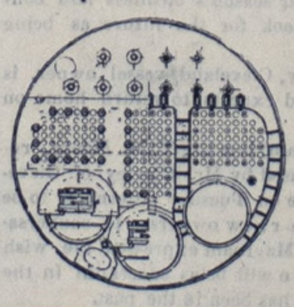

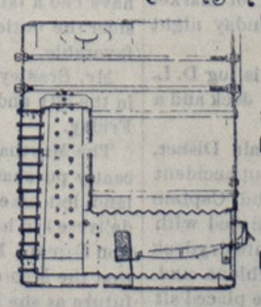

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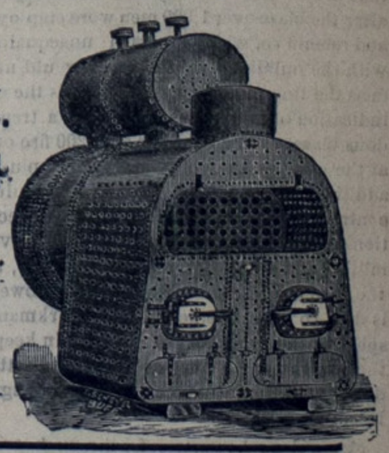

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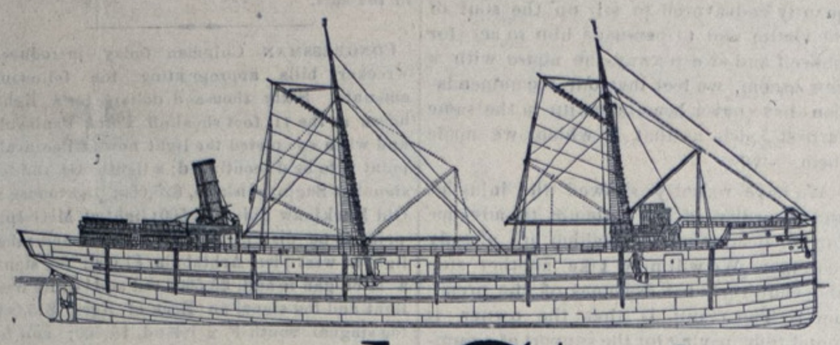

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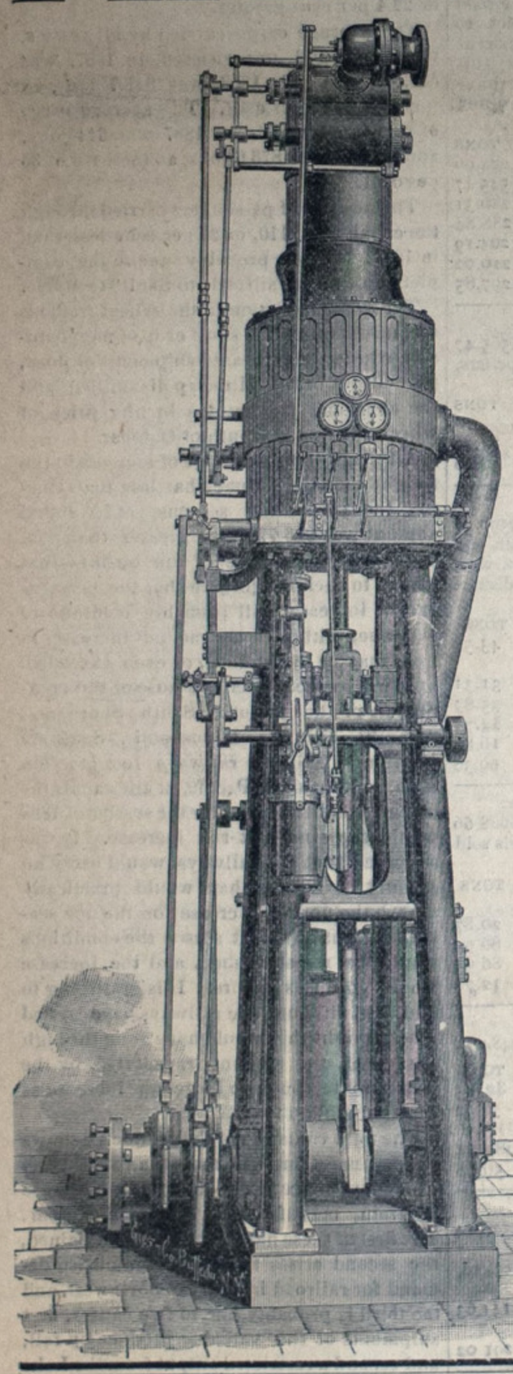

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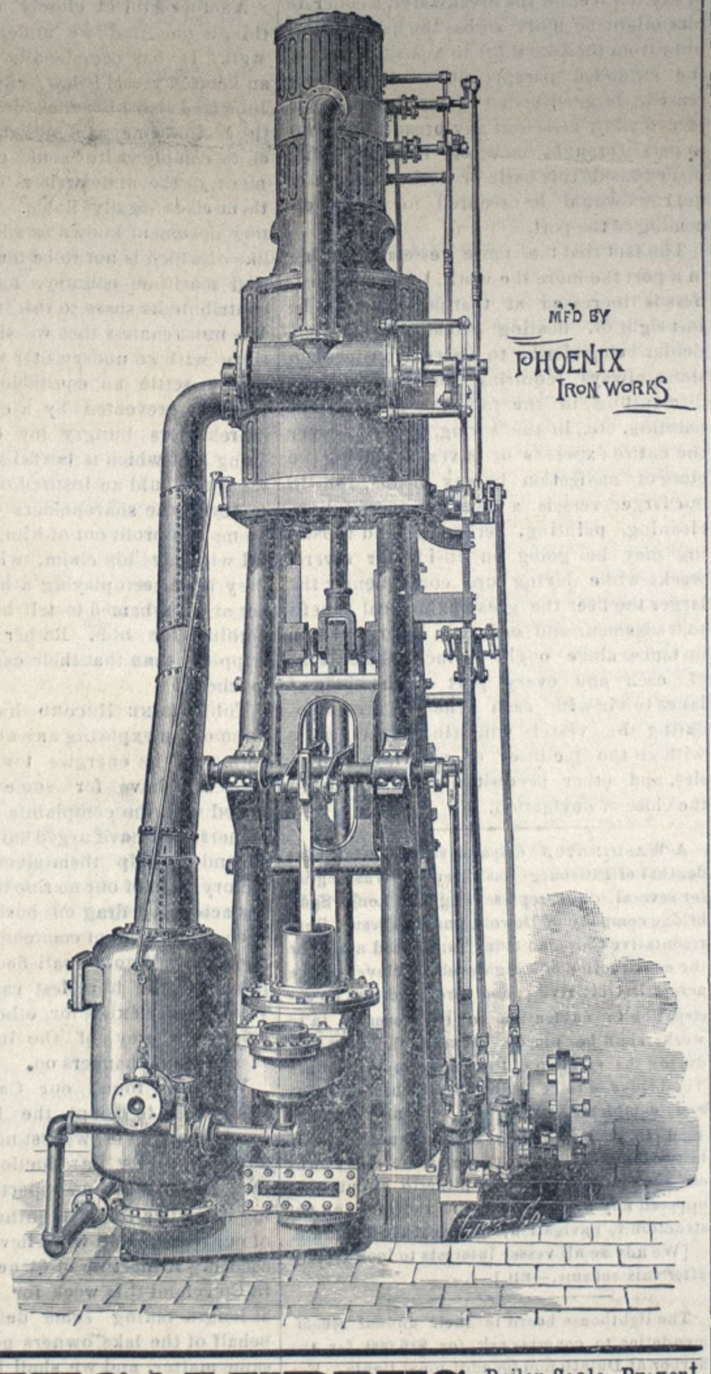

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CLEVELAND, O., DECEMBER 13.

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MARINE RECORD—OFFICIAL PAPER.

TYING UP PROCESS AND DOCKS.

The fact that a large number or vessels are finding great difficulty in securing berths for the winter at the principal ports on the chain of lakes is causing considerable dissatisfaction among vessel men generally, and harbor-masters are put to their wits end in looking up the legal rights of wharf owners, railway corporations, and others, for although water is as free as the air they find that real estate has some bona fide claims to ownership, and proprietary rights which cannot be ignored, and even where a dock front of two or three hundred feet is unoccupied at the close of navigation the harbor-master finds that he has no power to compel the owners of the frontage to allow vessels to be moored there in the absence of a mutual understanding or agreement between the property owners interested. The rivers in Chicago, Buffalo, and Cleveland must also be kept sufficiently clear to allow of the passage of the fire boats to the various parts of the city where extensive works and warehouses are adjacent to the river. These facts coupled with the large increase of tonnage put afloat upon the lakes for which wintering acommodations must be found, render the duties of harbor-masters, to say the east, unenviable, as in all cases where a dispute is liable to occur they are the men who have to stand to be shot at, not only by the municipal archers who draw the bow at the special authority given by the harbor rules and regulations, but also by those personally interested, who quote city ordinances and threaten litigation in cases where dollars and cents are concerned.

In view of these facts something must be done at an early date to facilitate the shipping interests by securing good and safe berths at a moderate cost during the close of navigation. There are several ways open to gain increased facilities in this direction, yet personal efforts would be required to bring about a satisfactory result, for while admitting the liberality of the United States Government in granting appropriations for the improvement of the rivers and harbors and also supplementing these grants by the appointment of an eminent class of qualified engineers to superintend and carry out the desired changes. Still many important features in connection with our shipping at the various ports on the chain of lakes might be carried out without invoking the aid of the government, either state or national. The breakwaters, as at present constructed in the principal ports, offer a large field for safe and convenient winter moorings, for the heavier tonnage especially. Even now the plan could be put in operation, and moorings made so that vessels might lay in tiers, moored head and stern in the outer bay behind the west arm of the breakwater.

At Cleveland, for instance, two anchors each weighing thirty to forty hundred pounds might be placed to the westward, good ground selected, and if thought necessary these anchors backed, a short scope of cable being shackeled on to an iron buoy, and moorings capable of holding a fleet of, say ten of the largest vessels, could be obtained, by making their cable chains fast to the ring in the buoy, the end vessels in the tier running out their own anchors ahead if considered advisable, the same method used for the stern moorings and the strongest blizzard would pass harmlessly over the one, two, or three tiers of vessels compactly and securely moored together.

So much of the river frontage is now owned by private parties who are awakening to the fact that a considerable rental may be derived from their wharves by making excessive charges on vessel property tied up during the winter, it behooves owners to cast around and find ways and means of getting out of the hands of these would be extortioners, for the party who asked the exorbitant rental of $300 for permitting a schooner to be moored to his dock can be considered nothing less hence, since the plan of moorings mentioned here have been adopted and are in constant use elsewhere, no merit can be asked for our advocating them, and only in the sense that they have been tried and trusted do we put the method forward, and not as an original scheme or innovation subject to ultimate failure or uselessness.

Another plan for winter moorings might be here spoken of, and although the accommodation would involve a considerable outlay, yet the increase of trade and tonnage would warrant the expenditure necessary in forming a large basin or dock in the outer harbor, with the addition of a parapet of say ten feet on the breakwater, a concrete pier might be built across the harbor, running from the lake shore to a position where the extended parapet on the breakwater ceased, large wooden gates fitted in the pier to allow vessels of any breadth of beam to pass through, mooring facilities being placed inside this basin or dock, and winter quarters would be secured for all vessels coming to the port.

The fact that the more vessels wintering in a port the more the work, trade and business is increased at that port must not be lost sight of, floating property in this particular being similar to places of business on shore, always requiring some outlay, the dismantling in the fall, the refitting and painting, etc., in the spring, does not cover the entire expenses of a vessel during the close of navigation by any means, for in our larger vessels a constant overhauling, cleaning, painting, rerigging and repairing may be going on inside for several weeks while laying up, consequently the larger the fleet the greater the local benefit to tradesmen and ordinary labor. These instances alnoe ought to incite the citizens of each and every port on the chain of lakes to vie with each other in accommodating the vessels wintering at their ports with all the facilities of wharfage courtesies, and other necessities required during the close of navigation.

A WASHINGTON dispatch says Gustav Lindenthal of Pittsburg has been in Washington for several days representing the Long Span bridge company of Detroit, and as a result Representative Chipman today introduced a bill for the construction of a highlevel cantilever bridge across Detroit river, and provided that no obstruction to navigation in the form of false works shall be placed between the river pier during the erection of the bridge superstructure The bridge is to be commenced within one year and completed within six. If any effort is made to push the bill it is presumed that a heavy lobby will be sent here by the vessel owners' assocsation, which has hitherto strenuously opposed any kind of bridge at Detroit as an obstruction to navigation, to defeat the measure.

[We advise all vessel iuterests to look closely after this scheme.—ED.]

The lighthouse board in their annual recommendation to congress ask for $16,000 for the harbor at Duluth and for additional lights. For Two Harbors the appropriation of the last congress is still available, but it has been impossible to purchase a site on the head lands, where a light and signals can be placed. At Ashland, Wis., $5,500 is recommended for a steam signal fro.; for Devils island, $15,000 for a light; for Gladstone Harbor Wis., at terminus of the Sault ste Marie & Atlantic railroad, $10,000. The board says 300 vessels went in and out last year and 1,000 are expected next.

THE OLD MAN OF THE SEA.

The Arabian navigator Sinbad of happy memory had once the misfortune of awaking on a lone sea beach after a shipwreck, to find a weird old man seated on his shoulders, and his adventures before he could get relieved of this incubus form not the least interesting part of his adventures. Our lake navigators like their oriental prototypes have become the victims of incubi who, seated on their shoulders, fatten and thrive at their expense, and who if remonstrated with tell them they ought to be grateful for the honors and advantages they enjoy through the connection. The happy family of underwriters and their satellites have oppressed the poor vessel-owner till he has become thoroughly wearied of their vagaries, and though the RECORD has frequently endeavored to stir up the soul of the victim and to persuade him to act for himself and sweep away the abuse with a new broom, we feel that our recommendations have never been taken up in the same earnest spirit as that in which we made them.

We have recently showed the injustice and absurdity of any attempt to advance further insurance rates which are already too high. We will now take another step and enquire, what becomes of the premiums? The result is that the owner is found to be paying for the support of a number of worthy individuals whose existenee is not of the slightest advantage to him and his. Speaking broadly, when an owner pays a premium of five per cent, he gets the value of no more than three per cent in return, and the same in proportion when the premium is larger. Where does the difference go to? If we consider that there is first, the agent to be paid—next heavy working expenses—then profits to the underwriting company's shareholders,—then bad debts,—then losses arising through the underwriter's errors,—all of which items have to be provided for out of the shipowner's pocket before auy part of his premium is available to pay bona fide losses. We are at the end of the mystery. we cannot understand why an owner should be content to pay a large sum yearly knowing all the while that from one half to one third is wasted so far as he is concerned. Our owners are kind hearted enough, but to take their own bread and waste it for the benefit of those who only look down upon them in return, is a course of proceeding which does not commend itself to our understanding, and we do not understand it.

Another subject closely connected with this, is one that we understand only too well. It has occasionally happened that an insured vessel is lost, and the owner is informed that his policy does not admit of the claim being paid, either he has neglected to comply with some obscure requirement, or the underwriters do not consider themselves legally liable. The unsatisfactory document known as a lake policy, the like of which is not to be found in any civilized maritime country, has not failed to contribute its share to this state of things. We must confess that we sincerely sympathize with an underwriter who would honorably settle an equitable claim, and yet who is prevented by a crowd of angry shareholders hungry for dividends, from doing that which is lawful and right. Why we ask, should an insured owner be at the mercy of the shareholders who only want to make a profit out of him, and if successful will pay his claim, while if they find they have been playing a losing game, are not at all ashamed to tell him they can do nothing for him. Rather he should be crippleq than that their capital should be touched!!

THE MARINE RECORD has always been foremost in exposing any abuse, and in devoting all its energies toward remedying it. We have for some years sympathized with the complaints of our vessel-owners. and have urged on them to organize and to help themselves. The unsatisfactory state of our marine insurance, which has acted as a drag on business, has often been the subject of comment in our pages, and we shall not be satisfied until we havs proved to the humblest capacity that the vessel owner exists for other purposes than being the prey of the insurance companies and their hangers on.

When we found our Canadian cousins were about to adopt the English mutual insurance system, we lost no time in again advocating its introduction here. Since then we have lost no opportunity of advancing its claims for the enthusiastic support of our owners and we believe we have succeeded. A meeting of owners is to be held in Cleveland this week for the purpose of at length taking some definite action on behalf of the lake owners generally in this same matter, and we shall be greatly surprised if something satisfactory to our whole shipping interest is not the outcome of this gathering.

THE Iron Trade Review says: While 1886, which marked the thirtieth year in the history of the Lake Superior iron ore district, witnessed the largest shipments and sales and the smallest proportionate surplus up to that time, and while the year 1887, which showed an increase production over 1886 of 32 per cent and an advance of sales of 48 per cent, was thought to have capped the climax, it has remained for the year 1888 to exceed all previous records in every respect mentioned. The production has exceeded that of the big year 1887 by 5 per cent; the sales for 1888 for lower lake delivery have topped those of 1887 by nearly 60 per cent and the paltry amount of 167,300 tons of ore remaining unsold at lower lake ports at the close of navigation represents merely odd lots that have accumulated at various points and are not readily sailable. The percentage of unsold ore, despite the heaviest receipts and the large amount remaining on dock, is the lowest within the past six years; in other words, the stocks are practically cleaned up. Ashtabula has received more ore than Cleveland this season, and Buffalo receipts increased from 28,699 tons in 1888 to 240,000 tons in 1888, on account of the demand for Lake Superior ore in the east.

CONGRESSMAN Chipman today introduced wrecker bills appropriating the following amounts: Sixty thousand dollars for a lighthouse at the 11 foot shoal off Point Peninsula and when completed the light now at Peninsula point is to be discontinued; a lighthouse and fog signal at Saginaw island, $25,000; lightnouse at Old Mackinaw Point, $2.500; light at McGulpin point to be discontinued; fog signal and range light at west pier, Ashtabula, $7,000; fog signal at Michigan island, $5,500; red and white flash light and fog signal on Rock of Ages, $15,000; fog singnal South Fox Island, $5,500; and fog bell at the east end of Portage lake ship canal, $700.

TONNAGE OF DETROIT.

DETROIT, Dec. 11th.

Special to the Marine Record.

Navigation has closed, and now retrospective reviews of the season's business are in order and in almost every paper one takes up, articles on the "Increase of tonnage, how lake freights ruled, total amount of ore, coal, grain, &c., carried", and] like articles appear. So although I am not a newspaper correspondent, or a seeker after a reporter's fame, still I am tempted to give a few facts in relation to the past years marine business in Detroit.

There has been surveyed and admeasured during the year a total of 33 vessels, the largest being of 2,299.19 tons burden, and the smallest 15.11 tons. The time occupied in surveying a vessel varies from two hours to three or four days, according to size of vessel, and its construction, and the results reached in admeasurement are without exception, mathematical wonders of correctness.

There have been recorded at Detroit 85 transfers of vessel property during the past year from one resident of the district to another, in which cases no change of port of hail, &c., &c., is involved. Besides this class of transfer, Detroit vessel-men have bought the following vessels from other districts.

SCHOONERS.	TONS.	SCHOONERS.	TONS
J. S Richards..	273.41	N. P Goodell.	224.06
Genesee Chief..	275.26	David Stewart..	545 47
S. B. Pomeroy.	406.87	St. Clair.....	286 31
N. C. West....	145.23	Banner.....	288.84
S.V.R. Watson.	515 80	David Brown..	204.19
Groton.....	352.04	Russell Dart..	210.92
Rainbow.....	168.17	Ben Hur.....	297.85
Reindeer.....	207.63		
N s au	315.02	Total 17 sail	
H. W. Sage...	848.40	vessels.....5565.47	

And the following steam vessels, propellers, barges and tugs:

PROPELLERS.	TONS.	PROPELLERS, TUGS	TONS
New Orleans...	1457.51		
J. S. Ruby....	128 88	J. W. Bennett..	81.37
Schoolcraft.....	745.50	C. W. Wells...	38.06
Low ll.....	344.36		
Mary Pringle..	204.66	Total 8 steam	
Artic.....	596.25	vessels....	3596.59

The following new steam vessels built and owned by Detroit parties in whole or part, were also added to the tonnage of the Detroit district during 1888:

PROPELLERS.	TONS.	PROPELLERS.	TONS.
Mecosta.....	1779.17	F. L. Baker...	43.52
St. Ignace....	1899.70	YACHTS.	
Tom Adams..	1810.67	Roberts.....	31.31
E. M. Peck....	1809.11	Louise.....	35.83
J. E. Owen....	1739.53	Bertie.....	14.75
John Craig....	2044.08	Lucille.....	16.85
Ever Ward....	1343.37	Vita.....	69.38
F. R. Buell....	1438.50		
J. V Moran....	1350 38	Total 16 steam	
Volunteer	1944.76	vessels...16668.66	

Following are the steam and sail vessels sold out of the Detroit district in 1888:

PROPELLERS.	TONS.	PROPELLERS. TUGS.	TONS.
Jus ice Field..	285.94		
John Craig....	2044 08	G. E. Fisher..	20.87
Wayne Isbell..	31 13	H. A. Ballentine	86 95
Empire, ...	265 32		86 95
F. R. Buell....	1438.50	Shoo Fly.....	12.78
Harlem.....	2299.19		
		Total 9 steam vessels....	6484.75

SCHOONERS.	TONS.	SCHOONERS.	TONS.
F. C.Leighton.	328 88	Two Brothers..	32 65
Home	125 12	Muida Bell....	38.32
Monterey.....	308.50	Knight Templar.....	289.74
H. A.Kent....	771.85		
Albany.....	283 89	Brenton.....	50.38
Montmorency..	298 91		
Bay City.....	306 23	Total 13 vessels.....	4528.14
Numeral State.	294.87		
S. E. Peck....	1399 40		

The following vessels were burned, wrecked, or abandoned:

J. A. Smith,...	255.67	Consuello.....	141.63
Banner.....	288.84	Oliver Cromwell.....	291.02
Mona.....	101 69		
St. Joseph....	61.94	Total 8 sail	
Frank Morrow.	52 01	vessels.....1479.17	
St. Clair.....	286.37		

PROPELLERS.	TONS.	PROPELLERS.	TONS
D. Dickinson..	354.07	Florence.....	56 83
Michigan..	234.35		
		Total 3 steam vessels,....	645.25

These lost vessels were of poor class.

The work at this port has been in every branch of marine business something phenominal.

STATISTIC.

LAKE CARRIERS' ASSOCIATION

TO CONSIDER AND TAKE ACTION UPON ALL GENERAL QUESTIONS RELATING TO THE NAVIGATION AND CARRYING BUSINESS OF THE GREAT LAKES AND THE WATERS TRIBUTARY THERETO, WITH THE INTENT TO IMPROVE THE CHARACTER OF THE SERVICE RENDERED TO THE PUBLIC, TO PROTECT THE COMMON INTEREST OF LAKE CARRIERS, AND PROMOTE THEIR GENERAL WELFARE.

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MARINE RECORD—OFFICIAL PAPER.

TRAFFIC OF ST. MAR CANAL.

DETROIT MICH., December 10.

Special correspondent to the Marine Record.

The following are the statistics of the commerce passing St. Mary's Falls canal during the season of 1888, just closed, including a comparative statement of the same for the seasons of 1887 and 1888, and an estimate of its value for 1888, based the unit prices heretofore used in similar estimates, because these afford a better basis of comparison than prices amended to conform to those actually prevailing.

The canal was open to navigation two hundred and twelve days during the season just closed, or eight days less than in 1887. The first vessel passed through on May 7, and the last one on December 4. It will be observed that whilst there was a decrease of 1552 in the number of vessels of all kinds, registered and unregistered, there was an increase of 233,061 tons in the registered tonnage, indicating an increase of 37 per cent in the average size of the vessels used, a condition decidedly favorable to the canal, since it is the number, rather than the size of vessels which limits the amount of business that the canal is capable of providing for.

The number of registered vessels through the canal in 1887, was 8530, and their average tonnage was 5742-10 and in 1888 their number was 7314, with an average tonnage of 703, while the number of registered vessels was 216 less in 1888 than in 1887. Therefore their average tonnage was 128.8 tons, or 22.4 per eent greater.

The average cargo carried by all vessels, registered and unregistered, in 1887, was 587.3 tons, and in 1888, was 821.7 tons, an increase of 40 per cent. The average cargo of registered vessels in 1887 was 644 tons, and in 1888 was 876.6 tons, an increase of 36 per cent.

The number of passengers carried through the canal was 7110, or 22 per cent less than in 1887. This is probably due to the completion of three railroads to Sault ste Marie.

The great reduction in the wheat traffic is accounted for by the short crop of merchantable wheat, the increased shipments of flour, the output of the Minneapolis mills,) and the abnormal fluctuations in the price of wheat during the month of October.

Although the percentage of increase in the freight tonnage is somewhat less than during the preceeding seasons, yet its actual amount was 916,776 tons greater than last year. The aggregate of the business has grown to such magnitude that the percentage of increase will probably continue to decrease, although the actual increase, in tons, may be maintained, or even exceeded.

It was expected that, because of the completion of the Duluth, South Shore and Atlantic, and the Minneapolis, Sault ste Marie and Atlantic railways to a junction with the Canadian Pacific, at the canal, the commerce of the canal for the season of 1888 would show no material increase. It was supposed that the railways would carry an amount of freight that would practically absorb the normal increase for the one season, but, that by next season the conditions would be re-established, and the increase would go on as before. It is gratifying to find that, although the railways have carried much freight that would have gone through the canal, the amount transported by the water route shows so large an increase as nearly a million tons.

The total valuation of the commerce shows an increase of but little more than $3,000,000. This is fully accounted for by the decrease in grain, manufactured iron, and copper. The first of these has already been explained, the second arises from the diminished demand for railroad iron in the northwest, and the third is probably due to two causes, first shipments of this valuable produce by rail, and second a restricted output from the Lake Superior mines. These causes may be considered as only temporary, and if this assumption is correct, the percentage of increase in the value of the commerce will probably be restored next season.

The item "unclassified freight" only amounts to about five per cent of the total freight tonnage. It includes 2419 tons of wool and 333 tons of hides.

The number of vessels with their cargoes

through the canal during the three busiest months, was as follows, viz:

For month of	Number.	Daily Average.	Freight—Tons.
June.....	1300	43.1	1,023,315
July.....	1396	45.	1,156,842
August.....	1448	46.7	1,212,893
Total	4144	45.	3,493,050

For month of	Number.	Daily Average.	Freight—Tons.
June.....	1685	56.17	953,021
July.....	1665	53.7	968,729
August.....	1790	57.42	973,926
Total	5130	55.76	2,896,474

The corresponding statistics for 1887 were as follows, viz:

ITEMS.	Units.	Quantity. 1887.	Quantity. 1888.	Increase. Amount.	Increase. Per ct.	Decrease. Amount.	Decrease. Per ct	Price per Unit.	Total Valuation.
Steamers		5,968	5,305			663	11		
Sail Vessels		2,562	2,009			553	21		
Unregistered Craft		825	489			336	40		
Total Vessels		9,355	7,803			1,552	17		
Lockages		4,165	3 845			320	8		
Tonnage, Registered	Net Tons.	4,897,598	5,130,659	233,061	5				
Tonnage, Freight	Net Tons.	5,494,649	6,411,423	916,776	17				
Passengers		30,668	25,558			7,110	22		
Coal	Net Tons.	1,352,987	2,105,041	752,054	56			$ 3 50	$ 7,367,643 50
Flour	Barrels.	1,572,735	2,190,725	617,990	39			5 00	10,953,625 00
Wheat	Bushels.	23,096,520	18,596,351			4,500,169	19	98	18 224,423 98
Grain (other than Wheat)	Bushels.	775,166	2,022,308	1,247,142	161			98	1,981,861 84
Manufastured Iron	Net Tons.	60,715	48,859			11,856	20	50 00	2,442,950 00
Pig Iron	Net Tons.	14,204	14 844	640	5			17 00	252,348 00
Salt	Barrels.	204,908	210,433	5,525	3			1 00	210,433 00
Copper	Net Tons.	31,886	28,960			5,926	17	200 00	5,792,000 00
Iron Ore	Net Tons.	2,497,713	2,570,517	72,804	3			3 50	8,996,809 50
Lumber	M. ft. b. m.	165,226	240,372	75,146	45			18 00	4,326,696 00
Silver Ore	Net Tons.	350	3,385	3,035	867			153 79	520,579 15
Building Stone	Net Tons	13,401	33,541	20,140	150			10 00	335,410 00
Unclassified Freight	Net Tons.	344,586	345,854	1,268	0			60 00	20,751,240 00
								Totals	$82,156,019 97

YEARS.	Valuatoin based on Estimate of 1885.
1885	$53,413,472 13
1886	69,080,071 95
1887	79,031,757 78
1888	82,156,019 97

From which it appears that notwithstanding a decrease of 986, or 19 per cent, in the number of vessels of all classes, unregistered included, there was an increase of 586,474 tons, or somewhat more than 20 per cent, in the amount of freight carried.

This was due to two causes; first, the higher stage of water in Lake Superior, and consequently in the canal; second, to the use of a greater proportion of large vessels.

Very respectfully, your obedient servant,

O. M. Poe,

Colonel of Eng. Bvt Brig. Gen. U. S. A.

FIFTY YEARS OF THE NORTH ATLANTIC PASSENGER TRADE.

Buffalo, December 14.

To the Editor of the Marine Record.

As it is now just half a century since the north Atlantic passenger trade may be said to have been inaugurated, and that principally through the skill and indomitable perseverance of Captain Ericsson and also by the way, just one hundred years since the first iron vessel was constructed, perhaps an epitome of the salient points in connection with this now enormous traffic, would not be quite uninteresting if not instructive to some of your readers.

In the year 1838 the ancient city of Bristol with its fine old cathedral, was a flourishing sea port town, and the now great city of Liverpool was not half its present size, and instead of seven continuous miles of docks with hundreds of gates and locks enclosing as many miles of shipping two or three tiers deep, it had not one mile and the total mercantile steam tonnage of Great Britian was barely 83,000 tons, whilst the same class of tonnage belonging to this country amounted to 193,423 tons. That is, our steam tonnage was then and for many years afterwards more than double that of the United Kingdom and her colonies combined.

At this time the triangular duel commenced between the two English west coast sea ports and this country, America made a bold struggle to obtain her share of her north Atlantic trade in steam, as she had so nobly held it by sail, and Bristol too, fought hard to retain or rather to obtain this great commerce to herself. But we now see that Liverpool proved the victor, and even to the present time seems to hold on to this Atlantic ferry traffic with an iron grasp in spite of the many natural advantages of Milford Haven as a sea port, or Holyhead as a great railway terminus. As a result of this spirit of enterprise this comparatively young sea port received and cleared over nine million tons of shipping during the last twelve months.

In April, 1838, the Great Western, 1340 tons and 400 horse power, started from Bristol for New York, the Sirius, 700 tons, having left Cork for the same destination two days earlier, and after voyages of fifteen and eighteen days respectively reached New York on the same day, and were received with volleys of artillery and the joyous acclamations of vast multitudes on land and water. Captains Haskins and Roberts were almost deified, and whether they otherwise fared as well as Mr. Cunard who had eighteen hundred invitations to dinner in twenty-four hours after arrival I know not, but doubtless they would not be neglected in this country, as brave mariners never were and never will be.

In 1840 the wooden side wheel steamer Britannia 207 by 34⅛ by 22½, 1156 tons, and 423 horse power, with Mr. Cunard on board sailed from Liverpool for Boston as the pioneer steamer of the Cunard Co., and she was soon followed by the Arcadia, Caledonia and Columbia, which kept up the mail service at a speed of 8½ knots, and an average consumption of about 40 tons of coal per day The former vessel could barely carry sufficient coal for the voyage so freight was out of the question, but how from the consumption of 40tons of coal in a modern steamer. 4000 tons of freight can be carried 5,000 miles.

Contemperaneous with these pioneers of the greatest enterprise of the oceans was the building of the fine old ship, still hard at the work demanded of her machinery, Great Britian 302x 51½x27½ which after a most chequered early life has succeeded in carrying more passengers over the oceans than any vessel afloat at this time, also Francis P. Smith was scheming out his plan for the screw propulsion of the Archmedies, Samuel Hall was fitting his surface condenser, the most valuable of all adjuncts to the marine engine, and John Penn was producing his justly celebrated oscillating engines, and other brains were at work in the same direction which has resulted in the oceans being covered with millions of tons of shipping. May it not truly be said of the work of almost any of these sturdy geniuses:

"A mighty leap was this, no transient stride
A great conception of still greater brain."

This was the opportunity for America but it was lost, I know not how unless the gain by others through the fostering care bestowed by all the great European nations, or their shipping was America's loss, but perhaps the following extract from a British shipbuilding author of that time, may give us some idea as to how they have gained ninety per cent of the present total ocean trade between the United States and Great Britain.

"The science of navigation, more than any other, takes the lead for its importance in relation to this and similar developments; and Great Britian, of all countries, can appreciate its value, having reaped great benefits from its advancement and being in its turn a blessing to others.

"Our island home and sea-girt land at all times forces this science on our attention, and leads the mind to practical efforts; self interest at one time and self protection at another urging us to strike for progress and pre-eminence."

Such was their decalogue, let us see the response. The Collins line started in 1850, but after a series of terrible disasters, collapsed through the withdrawal of the subsidy in 1858. In the same year that the Collins line was started the Inman line was begun with the iron steamer City of Glasgow of 16,000 tons and 350 horse power. She was the first passenger screw vessel to cross the Atlantic from Liverpool, though the Great Britian had been running successfully in another trade with a screw propeller as auxiliary power only. The next great vessel would be the Great Eastern, 680x83x60, and a displacement of 25,000 tons nominal horse power of screw engines 1,600, paddle 1,000, diameter of screw propeller 24 feet, diameter of paddle wheels 56 feet, dead weight ability 10,000 tons. But now the great passenger screw steam fleet of which the City of Glasgow was the precursor, excluding all those under 3,000 tons, has grow to some 150 vessels of an aggregate tonnageo f about 600,000 in the regular lines between Liverpool and New York, but the point is, that whereas the merchant marine belonging to this country was nearly three times as much as that of the British when the City of Glasgow first arrived here. Their steam tonnage is now more than four times as great as ours. Such a falling off as this must surely require attention, and when we compare foreign trade with foreign trade the comparison is still more in favor of the foreigner.

Joseph R. Oldham.

COAL CARGOES.

As the last cargo for 1888 left Buffalo on Wednesday, it is now possible to make an accurate calculation of the amount of coal shipped from this port this season. It is understood, of course, that the figures are based on the reports of the captains to the custom house, which are not taken from actual bills of lading, the bills usually being made after the boat has left port, and then sent to the consignee by mail. It is one of the curiosities of custom house rules that masters are by the blanks furnished them for clearing their vessels, supposed to swear to the accuracy of cargo figures which they well know are only estimated. But as these estimates are made on the draft of the vessels they are sufficiently accurate for purposes of comparison. The following list includes about 150,000 tons, which were taken by vessels clearing through from Tonawanda and not reporting their cargoes here. It is believed that, through a careful watch kept on these fugitive cargoes, scarcely one has been allowed to escape unrecorded. The list includes also nearly all of the Bay City deck loads of 100 tons, which, from not being regularly reported in the charter lists and loaded in vessels quite generally clearing at Tonawanda, are hard to gather up. Nearly all the coal going to Bay City is carried on deck.

Following is the full list, giving the amount sent to each port:

Chicago 1,082,560 tons, Milwaukee 627,655, Duluth 262,475, Superior 135,175, Toledo 83,745 Gladstone 39,575, Racine 36,825, Green Bay 33,925, Detroit 30,415, Saginaw 27,075, Ashland 27-135, Washburn 22,660, Marquette 18,920, Sheboygan 12,020, Manitowoc 10,595, Bay City 10-160, Lake Linden 9,670, Sandusky 8,680, Port Huron 7,910, Kenosha 7,405, Sault 5,300, Fort William 4,605, Windsor 3,995, Marinette 3,910 Kincardine 3,285, Hancock 2,720. Menominee 2,640, Marine City 2,250. Muskegon 2,070, Escanaba 2,050, Houghton 2,030, St. Clair 1,720 Kelly's Island 1,575, Portage 1,350, St. Ignace 1,250, Port Arthur 1,075, Cleveland 980, Port Clinton 975, Depere 945, Port Colburne 940, Ludington 900 Cheboygan 885, Alpena 800, Manistee 675 Michigan City 600, Manistique 550. Bay Mills 480, Oscoda 350, Put-in-Bay 350, Algonac 250, East Tawas 259, Romney 250. Amherstburg 200, Port Dover 125, Wallaceburg 100,

The above list includes 2,071 cargoes and embraces 55 receiving ports, and gives an average of 1,200 tons to the vessel, in spite of the large amount carried in canal schooners and lumber barges. It shows an advance over last year of more than 600,000 tons, with a demand that has lasted as long as a vessel could be induced to carry a cargo. The total being 2,546.905 tons —*Buffalo Express*

The river and harbor bill will probably be reported to the house tomorrow. The members of the committee on rivers and harbors allowed appropriations upon a basis of 33 per cent of the estimates furnished by the government engineer. So far as the lake ports are concerned, while such points as Cleveland and Toledo are awarded 33 per cent of the estimates, smaller ports like Vermillion and Port Clinton are not included, so that the allowance for such a port as Ashtabula might be increased. The last named harbor will be very likely to receive as much as the estimates call for, which is a trifle over $25,000. This distinction is made because of the rapidly growing importance of the port. Judge Ezra B. Taylor, who has charge of the direct tax bill in the house, says he anticipates no trouble whatever when the measure is passed to a vote. It is to be hoped in the interest of commerce that the measure will present a strong front.

Upon the recommendation of General O. M. Poe, the United States Secretary of War has authorized widening the channel at the Lime-Kiln crossing an additional forty feet. The channel is now 350 feet wide. A contract was recently awarded to Dunbar & Sullivan, to widen the channel 50 feet making it 400 feet wide, at a cost of about $131,000. General Poe, thinking the bids advertised for might be very reasonable, inserted a clause in the contract, after specifying the work to be done, and as much more as the United States may deem advisable. Finding the lowest bid much less than the work had ever been done for before, the General recommended the additional work with the result noted. The channel will be completed under the present contract to a width of 440 feet at a cost of an additional $114,000, or $245,000 in all. This will take some three years yet.

RELATIVE TO LAKE LEVEL.

Givens, O. December 10.

Editor of the Marine Record:

Would the removal by blasting of some of the rock of the outlet of Lake Erie, so as to level three or four inches, be good or bad for the harbor of Cleveland, and navigation interests. I believe this is contemplated by the officers at Buffalo as an improvement. I think it would be injurious to every harbor on Erie, the Detroit river, and the St. Clair flats canal. The reverse course should be done, that is the level should be raised 12 inches or as much more as a majority of interests would bear. This is practicable and easily done, and would be a general improvement on all existing improvements, though the age of miracles is past. The levels of all the lakes should be regulated so as to subserve the interests affected by their easy and safe navigation.

Secure the opinion of the men who sail the ships as to their plan, and publish. I think this is the best plan to pursue.

G. W. B.

[While we do not know of any disposition on the part of Major Mahan, U. S. Engineer, to attempt to lower the lake level by blasting or otherwise, we gladly comply with our correspondents request to invite any of our mariners to exchange their views with him through these columns. Ed]

TIOGA AND ALBANY.

Special to the Marine Record.

Chicago, December 5,

Hearing Wm. Kennedy, engineer of the steamer Albany, published a piece in the Marine Record, telling of how he beat the Tioga on her last trip up, I will state that for the past two months the Tioga has been running with a broken wheel, which reduces her speed about three miles per hour. There were twenty four inches broken off of one bucket, I then cut off the same length of the opposite bucket, so as to balance the wheel.

I can't make over eleven miles per hour with the wheel in this condition, so I say Mr. Kennedy can't make a record for himself or his boat by beating this time.

There have been engineers of good record on the Albany before Mr. Kennedy. They know what I say is the truth, also, they know how badly the Tioga can beat the Albany.

If Mr. Kennedy wished to gain a reputation for himself by a little newspaper notoriety, he is welcome to it.

John Mayberry, Engineer Propeller Tioga.

FORE AND AFT.

Excursionists are often attracted by the remarkable whiteness of the lighthouses, beacons and keepers' dwellings, and wonder how they are kept in such condition during the winter as well as summer. The material used is simply whitewash, and here is the United States formula for mixing a whitewash that when properly made and applied gives a white that does not easily rub off. To ten parts of best freshly slacked lime add one part of the best hydraulic cement. Mix well with salt water and apply rather thin.

The surveying boat 'Egeria,' of the British navy, which has been sounding about the Friendly Islands, has found two new great depths, one of 4,295 fathoms and the other of 4,430 fathoms—about five miles. They are in latitude 24° south, longitude 175t west. These are more than a thousand fathoms greater than any other depths known in the southern hemisphere, and are only exceeded in three spots in the world. These are 4,655 fathoms, off the northeast coast of Japan, found by the United States ship 'Tuscarora,' 4,475 fathoms, south of the Ladrone Islands, discovered by H. M. S 'Challenger,' and 4 561, north of Porto Rico, discovered by the United States ship 'Blake"

Navigation formally closed December 4, it is now the 8th and there isn't the first crystal of ice in the Mud lake. The weather has been warm and vessels might just as well have kept on in the even tenor of their way. Skippers and vessel men are mad at themselves for not attempting "just one more trip." However, marine insurance ran out and it probably is just as well. Then the marine hospitals have to live somehow.

A few days ago P. M. Church & Co., who are the buoy contractors on the Soo river received a letter from Horace Elmer, inspector of the eleventh district, to ascertain and report the number of buoys displaced by rafts, the number lost altogether and the number recovered and replaced. The report made by P. M. Church & Co. shows that ten buoys were removed from their proper position, all but one of which it is thought were displaced by passing rafts. Three were recovered that were lost in former years. One was lost this season. The chain, ball and sinker on the can buoy in Lake George were a so lost. The buoys were taken up about November 20 this year.

The Hon. George Kirkpatrick, ex-senator of the house of commons, is in the city preparing a measure which will be presented at the next session of parliament, favoring reciprocity in wrecking between Canada and the United States on the great lakes. A similar measure was introduced last session, but was rejected by the house of commons. Kirkpatrick says he has been assured that the measure will pass parliament.

The river and harbor appropriation bill has been completed by the committee and will be reported to the house early this week. It appropriates in round numbers $12,000,000.

The largest coal dock in America will be built at once at West Superior by the eastern railway company. It will be 2,000 feet deep and 800 feet wide, with a central vessel slip 2,000 feet long and 100 feet wide, giving 8,700 feet of dock frontage for unloading. Car tracks will run all through the structure, which will have a storage capacity of 1,500,000 tons of coal. The work of building the dock will begin immediately.

The government has granted the Canada Atlantic railway company power to bridge the St. Lawrence river at Coteau. This will complete a through line of railway to Boston and New York from Ottawa. The total length of the bridge, including abutments and piers is 4,050 feet. The approach on the north shore shows an ascending grading to the bridge of 30 feet per mile. The work will cost over $1,000,000.

During the season just closed there were received at West Superior 786,000 tons of coal as follows: Lehigh coal and iron company, 360,000: St. Paul & Pacific coal company, 250,000; Northwestern fuel company, 120,000; Ohio coal company, 56,000. Last year the total receipts were but 266,000 at three docks.

Notice has been received by Major Quinn of the appointment of the district engineers. The Northwestern district, will be, as heretofore, under command of Col. O. M. Poe, and Majors Strickner, McKenzie, Ludlow, Allen, Davis, Quinn and Lockwood, and Captain Ruffner and Marshall in charge of works.

A Milwaukee dispatch says owners of wheat are in market for sail vessels to store cargoes and deliver them to Buffalo upon the re-opening of navigation next season. They express a willingness to pay four cents per bushel, with the understanding that the grain is to be put on board at once.

Representative Crain, of Texas, will introduce a bill providing for the construction of one steel armored submerging cruiser with triple screws and armed with heavy rifled, high power pressure guns, and pneumatic torpedo throwers. The cost of this improved ship of war is fixed at $4,000,000.

OIL ON TROUBLED LAKES.

C. A. MacDonald, general agent for six lake marine insurance companies, says the latter will next season make a reduction in their premiums on all vessels carrying oil sufficient to cover the expense of oil and appliances. The use of oil on the lakes has been agitated for some time, but no practical steps have been taken until now. Steamers having three or four barges in tow will find the use of oil particularly advantageous, as experience has shown that the loss on these barges every season is very large. One of the most surprising things about the use of oil to lessen the dangerous effects of heavy seas is the small amount required. Two quarts an hour is all that is needed under ordinary circumstances although in the case of long tows that amount could be doubled.

Experience on the ocean has demonstrated that thick and heavy oils are generally the best. Crude petroleum is good, but its usefulness decreases as it has been refined.—*New York Herald.*

OIL TANK VESSELS.

Another explosion has occurred on board of an oil tank vessel showing that the risks attending this trade are not by any means to be under estimated. It took place on board the large steamship Ville de Calais in the harbor of Calias, in October last. Her freight of petroleum had all been delivered from her tanks and she was about ready for sea when the accident took place. The steamer was thoroughly shattered and her machinery a complete wreck. It is always difficult to obtain, under such circumstances an exact explanation of the cause of the mishap, but it appears to have a strong resemblance to the fatal accident of a similar character which took place on board of the Petriana, a vessel specially fitted for the carriage of petroleum oil in bulk, at Liverpool in 1886. Both vessels were filling their ballast tanks with water, and it seems as though the vapor generated by petroleum remaining in the ballast tanks was forced out through some orifice into the oil compartment, and then, a light having been incautiously introduced, the explosion follows as a natural consequence. It is quite clear from these warnings that the danger is not over, as soon as the vessel has got rid of her oil. Any volatile oils are equally liable to bring about the same results as petroleum, and therefore have to be treated with equal caution.

Congress having authorized the construction of a floating battery for coast and harbor defense, designs for the construction have been made The battery will be built of steel on the Monitor principle, tonnage 4,200 burden. She is to have an armament of four guns, of two 16 inches, and two of 12 inches double turreted, and fitted with all of the modern appliances and improvements, and will be manufactured in the United States.

The Marquette Mining Journal makes a final report of the past season's ore shipments. Below is presented a comparative statement of the lake shipments, covering the season just closed and those of 1887 and 1886:

Port.	1888.	1887.	1886.
Marquette	844.694	803,411	853,396
Escanaba	202,965	2,072,708	1,538,821
St. Ignace	107.399	91,544	74,590
Ashland, Wis.	1,016,414	1,040,727	721 983
Two Harbors	450,475	390.46	304,396
Total	4,6?1,947	4 398,857	3 493,186

The gain in lake shipments this year is 223,090 gross tons over those of 1887 and 1,128,767 tons over the shipments of 1886.

Wrecking & Lightering

—AT—

Reduced Prices

The Steambarge Mary Pringle, with steam pumps, steam hoister, and complete wrecking outfit, will be kept at S. B. Grummond's dock, foot of 1st street, the balance of the season, ready at a moment's notice, day or night.

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LEAKY PISTONS IN STEAM VESSELS.

An engineer, whose letter we print below sends us a valuable suggestion for preventing marine collisions. Many of these disasters, he shows, are probably due to leaky pistons, causing a failure of a steamer's engine to respond promptly to the action of the steam when the order is given to suddenly stop or reverse it. That pistons which under ordinary circumstances are tight may become leaky when subjected to sudden and greatly increased pressure is certainly most reasonable. Commanders of all steam vessels would therefore do well to carefully consider our correspondent's suggestions.—*New York Herald.*

BROOKLYN, E. D., November 21, 1888.

The alarming frequency of collisions between steam vessels of all sizes makes the question of the cause and prevention of accidents, which entail such vast loss of life and property, one of the most important presented to the owners and officers of such vessels, as well as to the general public.

When we take into consideration the character and skill of the men who have charge of steam vessels, and when we analyze the evidence given in the investigations which follow accidents of this character, it would be the height of absurdity to attribute them, save in a few exceptional cases, to incompetency or carelessness.

Thirty-five years' experience as an operating and constructing engineer has given the writer opportunities to observe a large number of such accidents, and the result of his observation has been the formation of an opinion on the cause of such as could not be accounted for by the carelessness or incapability of the pilots or engineers, which opinion he deems it a duty to present for public discussion.

While the opinion has been formed only after long and careful consideration the writer before giving it publicity, in order to learn the views of others who might have had similiar opportunities for observation, has, since the recent collision between the Umbria and Iberia, interviewed a number of pilots and engineers who agreed almost unanimously that the theory which follows is well founded.

When a steamer is approaching a dock or another vessel with which she might collide, the captain or pilot signals the engineer to slow, stop or reverse the engine, and if the order is given in time and obeyed promptly the momentum of the vessel should be arrested and the danger avoided; but if the signal is not given in time or not obeyed with sufficient promptness the vessel is carried onward by its momentum and the collision takes place, causing an outlay of indignation against those in charge of one or both colliding vessels.

Now, what does investigation almost invariably discuss? Simply this, that, while the signal is promptly given and promptly obeyed, the expected result is not obtained by the arrest of the momentum, which in consequence carries the steamer onward to destruction, a result which puzzles not only the general public but the experts who investigate the accidents, as well as the engineer or pilot in charge.

In the writer's opinion, this failure of the engine to respond promptly to the action on the steam is caused by leaky pistons, which permits the steam to pass between them and the cylinder, so that when the engineer attempts to reverse his engine the piston has steam at both ends, and therefore neutralized and inactive during the most critical moments, when such inaction is fatal.

Every well informed engineer knows that pistons which are tight under ordinary circumstances become leaky when subjected to sudden and greatly increased pressure, as in the case of stopping and reversing in rapid succession.

The obvious remedy is the construction of pistons which will be absolutely tight under all circumstances, without increasing the friction to such a degree as to lessen the power of the engine.

Respectfully submitting his views for consideration and discussion to engineers, engine builders and steamship owners, he remains, yours very truly. ROBERT H. SPEARS.

DULUTH PROSPECTS.

The prospects for next year are for an increase greater than that of last year. The St. Paul & Duluth road will handle its usual great quantity, the Eastern will be in the field all season and will be able itself to take care of a vast amount, while the Omaha which has decidad to increase its dock capacity, for flour here and transfer all its business from Washburn, will still further detract from the business of Chicago flour roads. All season, too, the Duluth Imperial mill will be turning out its 9,000 or 10,000 barrels a week, the greater part of which will b shipped abroad. All in all the outlook for the flour traffic of 1889 from the port of Duluth may be safely estimated at a considerable above 2,000,000 barrels, and will probably be nearer 2,300,000 barrels.

During the season just closing there has been a total of arrivals and departures at this port of 2,075 vessels reported at the custom house. This is a decrease of an even 400 from last year, which decrease had been expected as Duluth labored under disadvantages during the latter part of the season, her coal docks being so crowded with coal that many cargoes were taken to other ports and her elevators were comparatively empty of grain. Also owing to certain laws of clearance and reporting many ships which unloaded here were not obliged to report or clear. The freight tonnage of the port is vastly greater this year than ever before in the history of Duluth and shows to great advantage in comparison, flour, coal, ore and general merchandise business being much greater than ever before while the railroad steel, cedar ties, etc., form items of important receipts not to be overlooked in totals.

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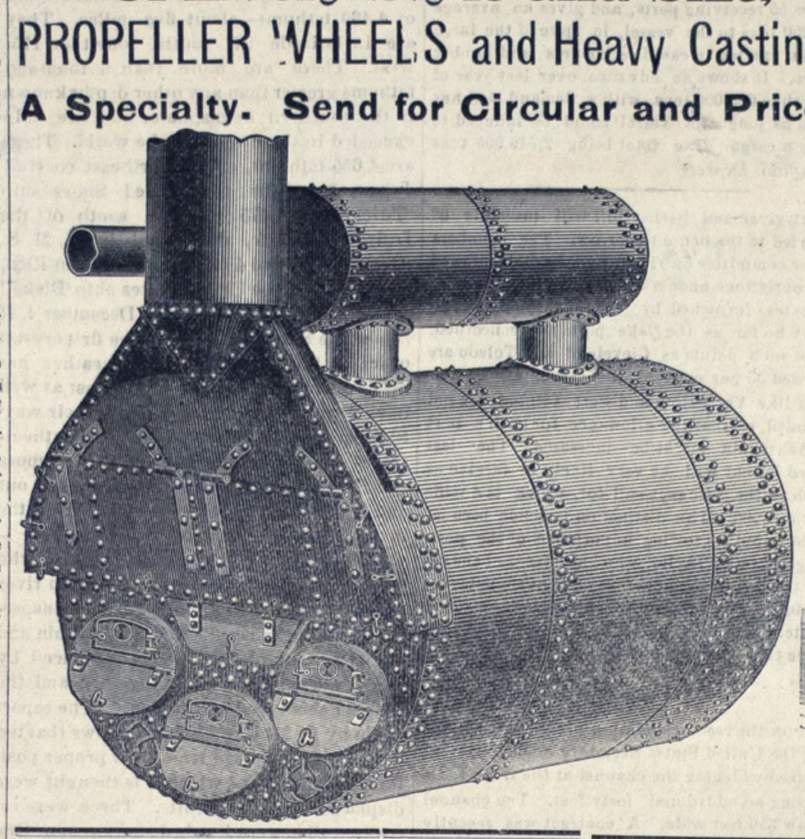

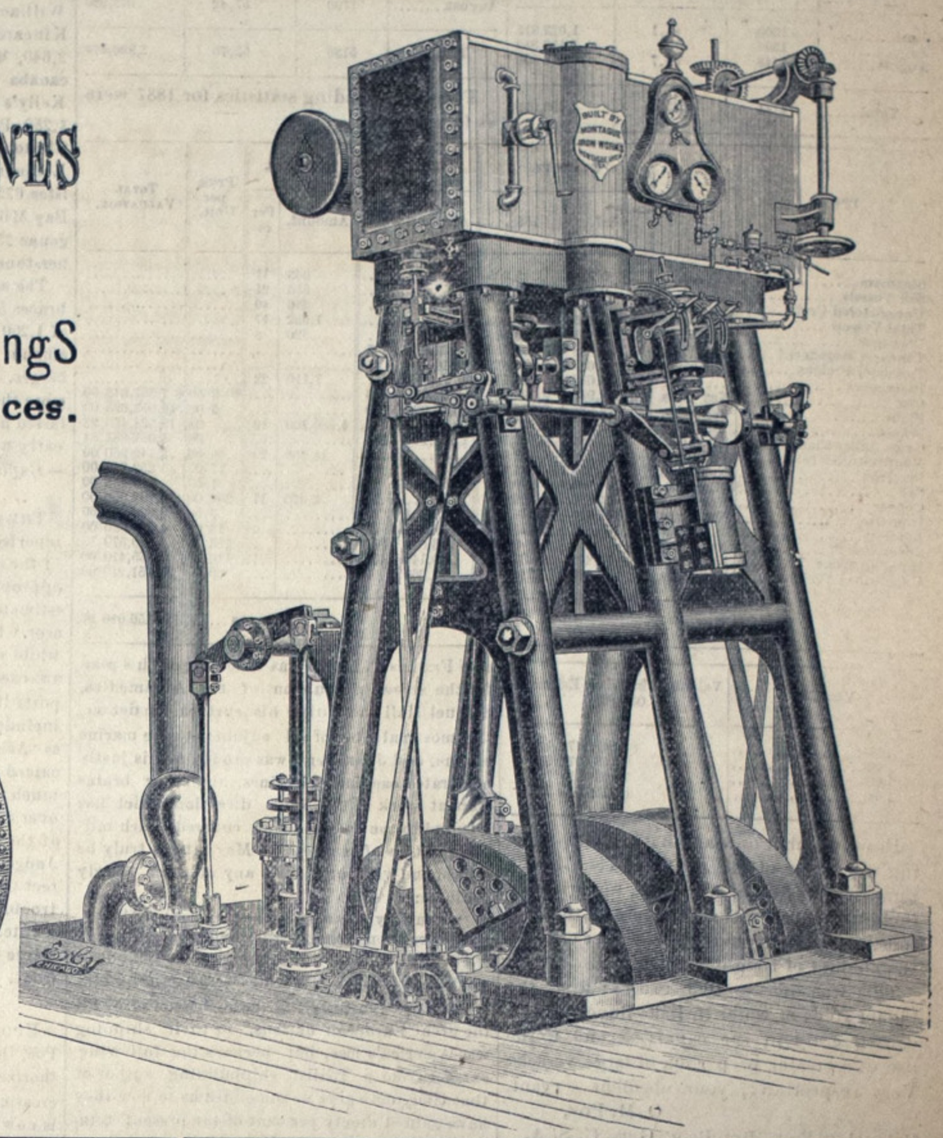

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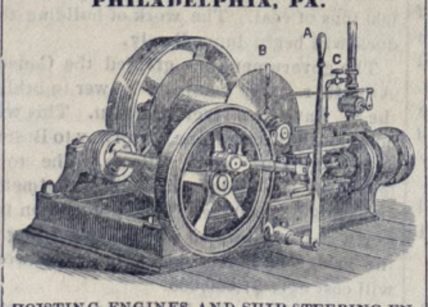

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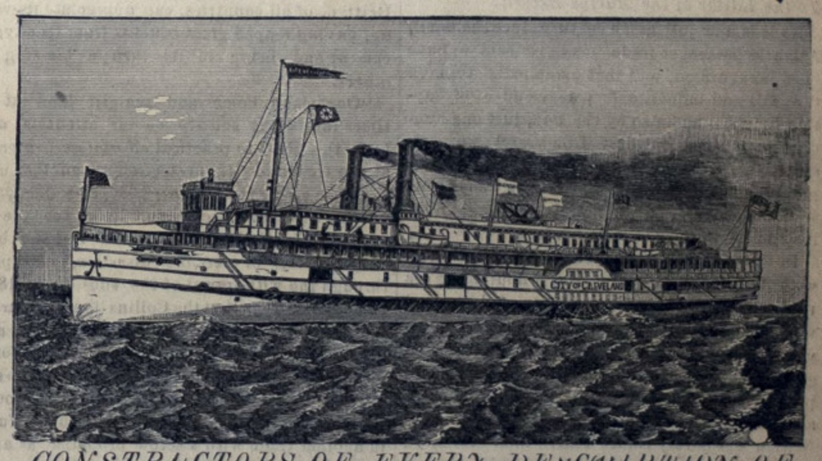

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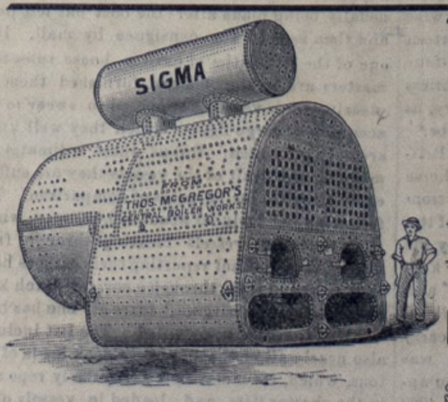

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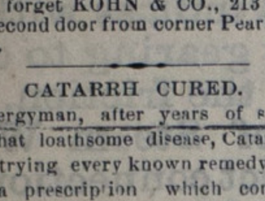

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No. 6 N. Y. & Boston Ex	*1 35 A M	*1 40 A M
No 8, N. Y. B & A Express	*8 95 A M	*8 50 A M
No 26, Elyria Accommodation	†7 45 A M	
No 10, Toledo Ac'm via Sandusky	†11 05 A M	
No 10, Toledo Accom via Norwark	†11 05 A M	
No. 24, Buffalo Accommodation		† 7 00 A M
No. 10, New York & Boston, "Flyer"		*11 50 A M
No 12, N Y & B Fast Express	*2 35 P M	3° 45 P M
No 2, Night Ex via Norwalk	9 40 P M	†10 00 P M
No 22, Night Ex via Sandusky	†9 40 P M	
No 26, Conneaut Accommodation	†4 25 P M	

Westward.	Arrive.	Depart.
No 1, Fast Limited Express	*12 15 A M	*12 15 A M
No. 23, Cleveland Express	*2 15 A M	
No 3, Chicago Express via "	§5 30 A M	5 45 A M
No 25, Mich Accom Norwalk		†5 45 A M
No 21, Toledo Ex via Norwalk	†12 50 P M	†3 20 P M
No 5, St Louis Ex via Sandusky	*10 50 A M	*10 55 A M
No 9, Chi Pac Ex via Norwalk	*6 55 P M	*7 15 P M
No 31, Elyria ac to Elyria only		†4 30 P M
No 27, Conneaut Accommodation	†8 10 A M	

Sunday train for Nottingham—Depart 9:20 a. m. and 1:00 p. m.; returning, arrive at 9:20 a. m. and 4:45 p. m.

Reference marks—* Daily, † daily, except Sunday, ‡ daily, except Monday.

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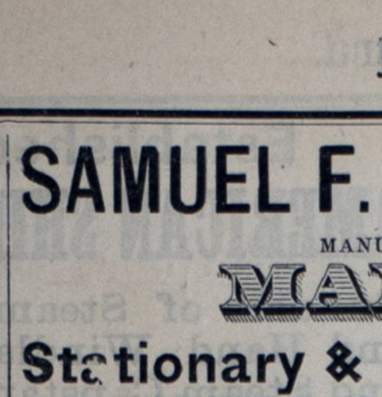

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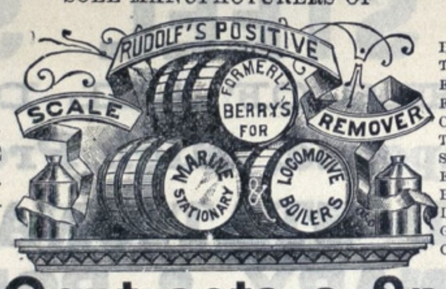

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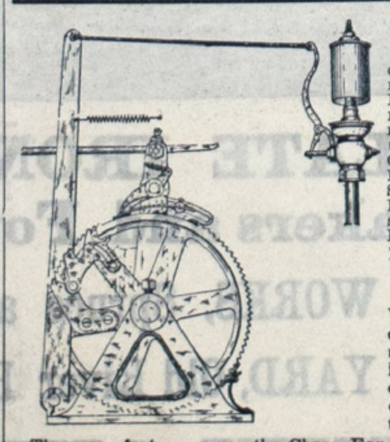

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GEO. H. STARBUCK,
W. D. ROBINSON,
} Committee.

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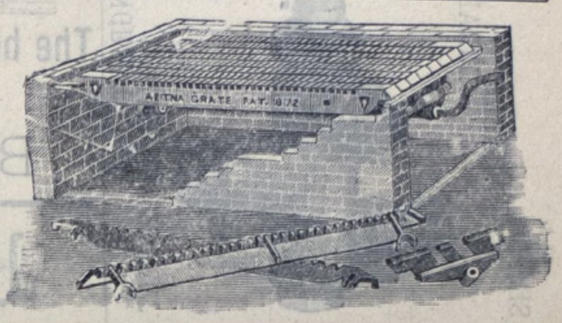

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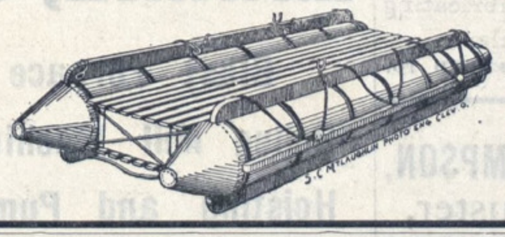

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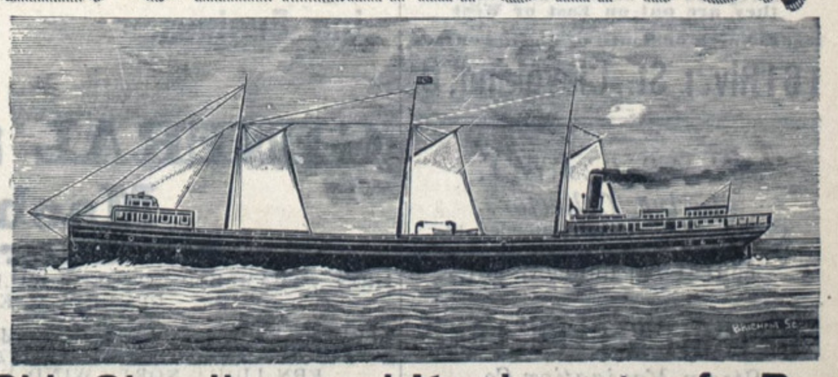

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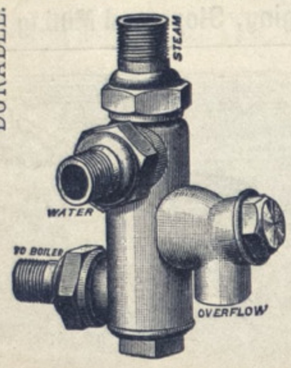

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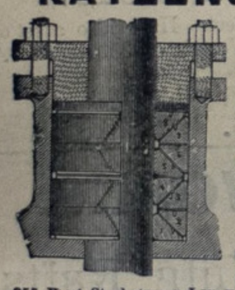

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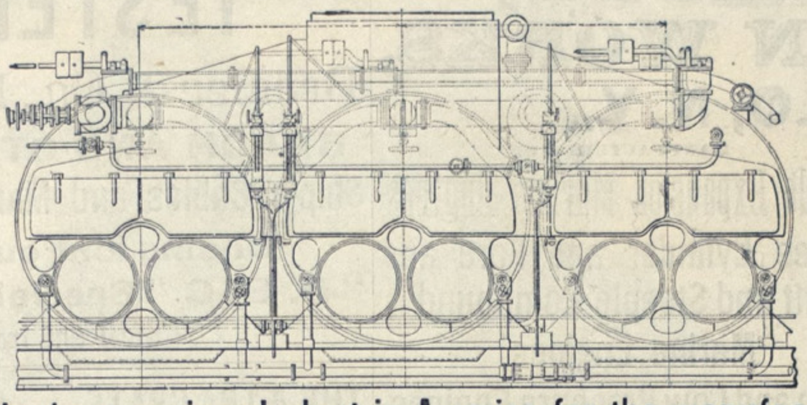

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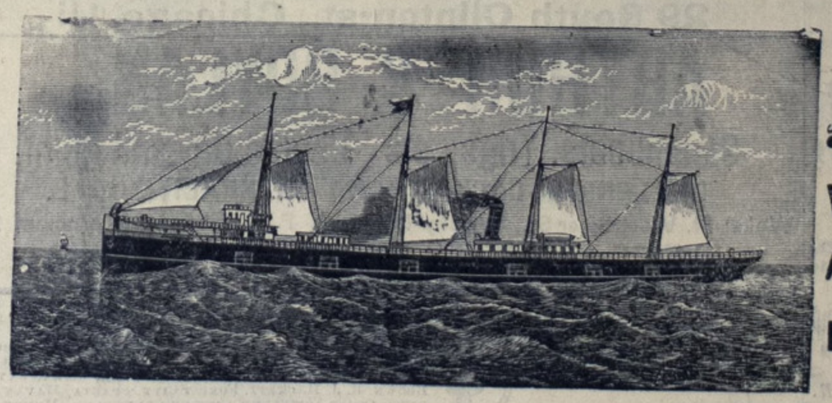

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